

PATENT

Application # 09/976,022

Attorney Docket # 1999-0644CON (1014-076)

## AMENDMENTS

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for restoring communications, comprising the steps of:

within a failed communications node, detecting a failed optical device;  
attempting to restore communications ~~within~~~~through the failed~~ communications  
node via a backup optical device; and  
attempting to restore communications by only communicating with at least one  
other communication node forwarding significant amounts of data; and  
attempting to restore communications by communicating with an entire network.

2. (Original) The method of claim 1, wherein the step of attempting to restore communications by only communicating with communications nodes forwarding significant amounts of data is limited to communicating with those communications nodes impacted by the communications to be restored.

3. (Currently Amended) The method of claim 1, wherein the communications node uses at least ~~one~~~~one~~ of a routing table, at least one cross connect mapping and at least one logical connection between communications nodes to attempt to restore communications.

4. (Original) The method of claim 1, wherein the communications node restores communications using at least one of managing peer interfaces, managing external interfaces, managing internal resources, and managing faults at the network edge.

5. (Original) The method of claim 1, wherein the communications node uses at least one of internal or external gateway protocols, Open Shortest Path First (OSPF), border gateway

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protocol and Intermediate Systems-Intermediate Systems (IS-IS) signals to discover a network topology.

6. (Original) A network using the method of claim 1.

7. (Original) The method of claim 1, wherein the communications node communicates with other communications nodes using at least one of signaling via IP packets, Resource Reservation Protocol (RSVP) and Constraint Based Routing-Label Distribution Protocol (CR-LDP).

8. (New) A method comprising a plurality of activities comprising:

within a first node, determining a detected error rate in a video stream;  
ignoring the detected error rate until the detected error rate exceeds a predetermined threshold;  
switching from a failed optical device to a backup optical device responsive to the detected error rate exceeding the predetermined threshold.

9. (New) The method of claim 8, wherein the detected error rate is determined from bit errors.

10. (New) The method of claim 8, wherein the detected error rate is determined from octet errors.

11. (New) The method of claim 8, wherein the detected error rate is determined from cyclic redundancy check errors.

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12. (New) The method of claim 8, wherein the detected error rate is determined from checksum errors.

13. (New) The method of claim 8, wherein the detected error rate is determined from framing errors.

14. (New) The method of claim 8, wherein the detected error rate is determined from framing errors.

15. (New) The method of claim 8, further comprising:

determining that a single bit error has occurred in a web-file transfer; and  
switching from a failed optical device in a communications node to a backup optical device in the communications node responsive to the single bit error.

16. (New) A method comprising a plurality of activities comprising:

within a first node, determining that a bit error has occurred via low-level error detection;

communicating the bit error to an IP Layer via an application programming interface; and

switching from a failed optical device to a backup optical device responsive to the bit error.

17. (New) The method of claim 16, further comprising:

pinging a second node; and  
detecting the bit error responsive to said pinging activity.

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**18. (New) The method of claim 16, further comprising:**

**sending a message that requests a response from a second node; and**

**detecting the bit error responsive to not receiving the response from the second node.**

**19. (New) The method of claim 16, further comprising**

**pinging a nearest neighbor on a network path; and**

**detecting the bit error responsive to said pinging activity.**

**20. (New) The method of claim 16**

**pinging all nodes on a network path; and**

**detecting the bit error responsive to said pinging activity.**